

REMARKS

Claims 1-42 are pending in the application. Claims 5-20 and 24-39 were previously withdrawn. Claims 1-4, 21-23 and 40-42 are rejected. Applicants submit that no new matter has been added by these amendments. Applicants respectfully request reconsideration and favorable action in this case.

Claim Rejections – 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1-4, 21-23 and 40-42 are rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the pre-grant publication '924 to Brown et al (US 2002/0178924). Applicant respectfully traverses these rejections and all assertions therein.

Independent claim 1 recites “wherein fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different water and oil components having different specific gravities.” As noted in the rejection of claim 1, Brown fails to disclose that the separator separates oil and water. It is argued, however, that it would have been obvious to use the separator of Brown to separate oil and water as opposed to gas and oil, because it is common knowledge within the art that separators can be used for both instances. Applicant submits, however, that the rejection fails, because the alleged common knowledge within the art has not been shown.

To wit, in the rejections relying on Kolpac (5,482,117) in view of Cobb (6,382,317), Cobb is read as disclosing “that a separator that separates gas and liquid is capable of separating any two fluids with different specific gravities.” (Office Action, pg. 3, para. 5.) Applicants dispute that Cobb makes such a broad statement. The cited passage from Cobb states:

It should be noted, however, that separators are useful not only to separate well liquids and gas, but may also be used in separating any two fluid substances which have different specific gravities.

A careful read of this sentence reveals it is in no way stating that a given separator, such as one for separating gas and oil, may be used for separating *any* two fluid substances of different specific gravity, as is asserted.

Even after making this statement, Cobb does not disclose that its separator can be used for separating any two fluids. For example, the cited passage continues on to state that the Cobb separator, primarily useful in separating gas and well liquids, can also be used in separating gas and water without substantial alteration. (col. 1, ll. 52-58). In both instances, gas-well liquids and gas-water, the Cobb separator is described as separating gas and liquid. Cobb provides no examples of separating two different liquids.

Moreover, Cobb, Kolpack, and Brown all explicitly specify their separators as separating gas and liquid (see, e.g., the titles of Cobb, Kolpack, and Brown each specify "gas" separators/separation). If, as asserted in the rejection, any separator could be used for separating any two fluids of different specific gravity, it would not be necessary, and indeed would not make sense, for Cobb, Kolpack, and Brown to distinguish their respective separators as gas-liquid versus liquid-liquid.

Turning now to Brown, it is asserted that the Brown separator "can be used to separate streams where both streams contain liquid" and "that a fluid of one density is separated from a fluid of another density." The cited passages, however, are not referring to separating two different liquids, such as in the present claims. Rather, Brown is referring to separating a liquid mixed with a high concentration of gas (the "less-dense fluid") from the same liquid mixed with a low concentration of gas (the "more-dense fluid"). In essence, Brown is describing that its separator is not 100% efficient and some portion of the liquid remains in the separated gas stream. It should be noted that the specific gravity of gas is vastly different from the specific gravity of liquids, such as oil and water, and that the specific gravity of oil and water are very close by comparison. There is no indication in Brown that its gas separator, configured to separate fluid streams having vastly different specific gravities, could also separate two different liquids that by comparison have close specific gravities.

In view of the above, Applicants submit it has not been shown to be common knowledge within the art that a separator for separating gas and liquid can also be used for separating two different liquids, such as oil and water. Therefore, it has not been shown that it would be obvious to use the separator of Brown in separating oil and water, and Applicants respectfully request withdrawal of the rejections to claims 1-4 under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the pre-grant publication to Brown.

Regarding independent claim 21, the claim as amended, recites "a rotating member disposed in the housing and adapted to subject fluid flowing through the rotating member to centrifugal force such that the fluid is separated into at least a first heavier liquid and a second lighter liquid." Independent claim 40, as amended, includes a similar limitation. It has not been shown that Brown discloses separating a first and a second liquid. Rather, Brown discloses separating the same liquid with varying amounts of gas (and resulting specific gravities). Therefore, for at least this reason, it has not been shown that Brown discloses each and every limitation of independent claims 21 and 40 and their respective dependent claims. Accordingly, Applicants respectfully request withdrawal of the rejections to claims 21-23 and 40-42.

Claims 1-4 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolpack et al. in view of Cobb. Applicants respectfully traverse these rejections and all assertions therein.

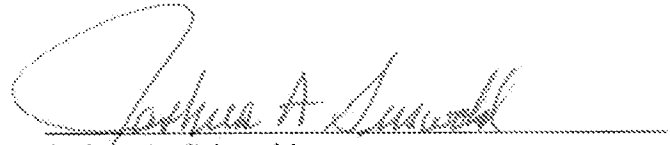
To wit, as noted in the rejection, Kolpack fails in at least that it does not disclose its separator separates oil and water. Moreover, claim 1 recites "a cylinder rotatably disposed in the housing and defining a flow passage therein" and "wherein fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different water and oil components having different specific gravities." Reference 85 of Kolpack is cited as being the flow passage. However, Kolpack describes separating gas and liquid in the separator section 40, where shaft 34 and helical baffle 56 are stationary. The gas separated in separator section 40 then flows into the passage 85, but is not described as being further separated in passage 85. (col. 5, lines 16-29). Accordingly, it has not been shown that Kolpack discloses "a cylinder rotatably disposed in the housing and defining a flow passage therein" and "wherein fluid flowing through the housing enters the flow passage and is subjected to centrifugal force such that the fluid is separated into different water and oil components having different specific gravities." For at least these reasons, Applicants respectfully request withdrawal of the rejections to claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Kolpack et al. in view of Cobb.

CONCLUSION

In view of the above, and for other reasons clearly apparent, Applicants respectfully submit that the Application is in condition for allowance, and request such a Notice. If the present Application is not allowed and/or if one or more of the rejections is maintained or made final, Applicants hereby request a telephone conference with the Examiner and further request that the Examiner contact the undersigned attorney to schedule a telephone conference.

No fees are believed due at this time. However, please apply any deficiencies or any other required fees or any credits to deposit account 06-1050, referencing the attorney docket number shown above.

Respectfully submitted,


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